

FASEB SUMMER RESEARCH CONFERENCES
PROPOSED PROGRAM

CONFERENCE ON PLANT GENE EXPRESSION
CHAIRPERSON Peter H. Quail
Affiliation Plant Gene Expression Center, Albany, CA
VICE-CHAIRPERSON Michael Bevan
Affiliation PBI, Cambridge UK

SESSION 1 - Date: Monday, August 7

9:00 a.m. - 12:00 p.m.

Topic: Mutant isolation and analysis I

Discussion Leader: *Virginia Walbot - Stanford University

- Speakers: 1. 9:00-9:30 *Howard Goodman - Massachusetts General
Mapping the Arabidopsis genome
2. 9:30-10:00 *Virginia Walbot - Stanford University
Mutator-induced mutants
3. 10:00-10:30 *Barbara Baker - PGEC - Molecular genetic
properties of Ac and Ds transposition in
heterologous plant species: Strategies
for transposon tagging
10:30-11:00 Coffee
4. 11:00-11:30 *Stephen Dellaporta - Yale University
transposon tagging
5. 11:30-12:00 *Jonathan Jones - Sainsbury Laboratory
Transposition in heterologous systems:
means and ends

SESSION 2 - Date: Monday, August 7

7:30 p.m. - 10:00 p.m.

Topic: Mutant isolation and analysis II

Discussion Leader: *Gerald Fink - MIT

- Speakers: 1. 7:30-8:00 *John Schiefelbein- Michigan State
University - Genetics of root development
and Ac in Arabidopsis
2. 8:00-8:30 *Gerald Fink - Tryptophan biosynthesis in
Arabidopsis thaliana
8:30-9:00 Coffee

*Acceptances to date

3. 9:00-9:30 *Michael Freeling - U.C. Berkeley -
Developmentally complex changes in gene
expression caused by the insertion or
excision of Mu transposons
4. 9:30-10:00 *Martin Yanofski - Caltech
Genes directing flower development in
Arabidopsis

SESSION 3 - Date: Tuesday, August 8

9:00 a.m. - 12:00 p.m.

Topic: Floral development

Discussion Leader: *Martha Crouch - Indiana University

- Speakers:
- | | | |
|----|-------------|---|
| 1. | 9:00-9:30 | *Enrico Coen - John Innes Institute
Floral mutants in <u>Antirrhinum majus</u> |
| 2. | 9:30-10:00 | *Adrienne Clarke - University of Melbourne
Self-incompatibility in flowering plants |
| 3. | 10:00-10:30 | *Sam Levings - North Carolina State
University - Cytoplasmic male sterility
and disease susceptibility in maize |
| | 10:30-11:00 | Coffee |
| 4. | 11:00-11:30 | *Sheila McCormick - PGEC - Molecular
characterization of anther-expressed
genes in normal and male sterile tomatoes |
| 5. | 11:30-12:00 | *Martha Crouch - Gene expression during
pollen development |

SESSION 4 - Date: Tuesday, August 8

2:00 p.m. - 4:30 p.m.

Topic: Workshop - Transformation methods

Discussion Leader: *Rob Horsch - Monsanto

- Speakers:
- | | | |
|----|-----------|---|
| 1. | 2:00-2:30 | *Michael Fromm - PGEC - Gene transfer and
expression in maize |
| 2. | 2:30-3:00 | *Ken Barton - Agracetus - Soybean
transformation |
| 3. | 3:00-3:30 | *Kokichi Hinata - Tohoku University
rice transformation |
| 4. | 3:30-4:00 | *Luis Herrera-Estrella - CIEA del IPN,
Irapuato - <u>Agrobacterium</u> -mediated monocot
transformation |
| 5. | 4:00-4:30 | *Emmanuel Picard - CNRS Gif sur Yvette
wheat transformation |

SESSION 5 - Date: Tuesday, August 8

7:30 p.m. - 10:00 p.m.

Topic: Developmentally-regulated genes

Discussion Leader: *Robert Goldberg - UCLA

- Speakers:
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| 1. | 7:30-8:00 | *Robert Goldberg - Regulation of seed protein gene expression |
| 2. | 8:00-8:30 | *Natasha Raikhel - Michigan State University Cellular and molecular expression of <u>Gramineae lectins</u> |
| | 8:30-9:00 | Coffee |
| 3. | 9:00-9:30 | *Roger Beachy - Washington University embryogenesis |
| 4. | 9:30-10:00 | *Don Grierson - University of Nottingham fruit ripening |

SESSION 6 - Date: Wednesday, August 9

9:00 a.m. - 12:00 p.m.

Topic: Regulatory molecules I

Discussion Leader: *David Baulcombe - Sainsbury Labs

- Speakers:
- | | | |
|----|-------------|---|
| 1. | 9:00-9:30 | *David Baulcombe - The use of transient expression to analyze the regulation of genes by gibberellic acid |
| 2. | 9:30-10:00 | *Sakis Theologis - PGEC - The ACC synthase gene |
| 3. | 10:00-10:30 | *Robert Fischer - U.C. Berkeley Regulation of tomato fruit ripening |
| | 10:30-11:00 | Coffee |
| 4. | 11:00-11:30 | *Donald McCarty - University of Florida Molecular analysis of the viviparous-1 locus in maize |
| 5. | 11:30-12:00 | *Mark Estelle - Indiana University Characterization of hormone resistant mutants of <u>Arabidopsis</u> |

SESSION 7 - Date: Wednesday, August 9

2:00 p.m. - 4:30 p.m.

Topic: Workshop - Novel Methods

Discussion Leader: *Rob Horsch

- Speakers:
- | | | |
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| 1. | 2:00-2:30 | *Ingo Potrykus - Swiss Fed. Inst. Technology Gene transfer by microinjection into proembryos |
| 2. | 2:30-3:00 | *Jerzy Paszkowski - Swiss Fed. Inst. Technology - Gene replacement in plants |

3. 3:00-3:30 *Bill Hiatt - Calgene - Reduction of polygalacturonase activity in tomato fruit by antisense RNA
4. 3:30-4:00 *Jim Haselhoff - CSIRO - ribozymes
5. 4:00-4:30 *Steve Rogers - Monsanto - Gemini virus vectors for transient assay of gene expression

SESSION 8 - Date: Wednesday, August 9

7:30 p.m. - 10:00 p.m.

Topic: Regulatory molecules II

Discussion Leader: *Tom Guilfoyle - University of Missouri

- Speakers:
1. 7:30-8:00 *Harry Klee - Monsanto - The effects of auxin and cytokinin perturbation on plant growth and development
 2. 8:00-8:30 *Tom Guilfoyle - University of Missouri Organ- and tissue-specific auxin-regulated gene expression
 - 8:30-9:00 Coffee
 3. 9:00-9:30 *Jeff Schell - Max Planck, Köln Genes involved in auxin signal transduction
 4. 9:30-10:00 *Wesley Bruce - PGEC - Promoter analysis of an oat phytochrome gene

SESSION 9 - Date: Thursday, August 10

9:00 a.m. - 12:00 p.m.

Topic: Environmentally-regulated genes

Discussion Leader: *Anthony Cashmore - University of Pennsylvania

- Speakers:
1. 9:00-9:30 *Elaine Tobin - UCLA - Phytochrome-regulated genes in Lemna and Arabidopsis
 2. 9:30-10:00 *Anthony Cashmore - University of Pennsylvania - Factors mediating expression of light-regulated genes
Laura Sarcin
 3. 10:00-10:30 *Philip Gilman - Rockefeller University Regulation of light-responsive genes
 - 10:30-11:00 Coffee
 4. 11:00-11:30 *Gloria Coruzzi - Rockefeller University Regulation of genes for enzymes along a N-metabolic pathway in plants
 5. 11:30-12:00 *William Gurley - University of Florida Cis-/trans-regulation of heat shock promoters

SESSION 10 - Date: Thursday, August 10

2:00 p.m. - 4:00 p.m.

Topic: Plant-pathogen interactions

Discussion Leader: *Christopher Lamb - Salk Institute

- Speakers:
- | | | |
|----|-----------|---|
| 1. | 2:00-2:30 | *Christopher Lamb - Defense gene regulation |
| 2. | 2:30-3:00 | *Clarence Ryan - Washington State University
Regulation of expression of proteinase
inhibitors in plants |
| 3. | 3:00-3:30 | *Lothar Willmitzer - Inst. für Genbiol.
Forschung, Berlin - Analysis of the
expression of proteinase inhibitor II
genes in potato |
| | 3:30-4:00 | Coffee |
| 4. | 4:00-4:30 | *Jeff Bennetzen - Purdue University
Mutational analysis of disease resistance
genes in maize |
| 5. | 4:30-5:00 | *Brian Staskawicz - U.C. Berkeley
Molecular analysis of recognitional
specificity and disease resistance in
plant-bacterial interactions |

SESSION 11 - Date: Thursday, August 10

7:30 p.m. - 8:30 p.m.

Topic: *Leon Dure: University of Georgia - Keynote Address -
LEA proteins and their genes

SESSION 12 - Date: Friday, August 11

9:00 a.m. - 11:30 a.m.

Topic: Agricultural applications

Discussion Leader: *Robb Fraley - Monsanto

- Speakers:
- | | | |
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| 1. | 9:00-9:30 | *Robb Fraley - Monsanto
Crop improvement research at Monsanto |
| 2. | 9:30-10:00 | *Jan Leemans - Plant Genetic Systems
TBA |
| | 10:00-10:30 | Coffee |
| 3. | 10:30-11:00 | *John Bedbrook - Advanced Genetic Sciences
TBA
<i>Carl Falco</i> |
| 4. | 11:00-11:30 | *Barbara Mazer - Du Pont - Herbicide
resistance imparted by altered ALS genes |

Bus 12:00